What is claimed is:

1. A method of detecting the alignment of two layers in an integrated circuit comprising multiple stacked layers of material, one underlying layer having a first alignment mark and one overlying layer having a second alignment mark, the method comprising:

detecting the first alignment mark and a reference alignment mark using a first alignment tool and forming thereof a first image;

detecting the second alignment mark and the reference alignment mark using a second alignment tool and forming thereof a second image;

forming a composite image from the first and second image by aligning the reference mark in the first and second image.

2. The method of claim 1 further comprising scanning the integrated circuit relative to the first and second alignment tools.

3. The method of claim 1 wherein the step of detecting the first alignment mark comprises observing the integrated circuit with a wavefront sensing tool.

4. The method of claim 1 wherein the step of detecting the second alignment mark comprises observing the integrated circuit the mark with a microscope.

5. The method of claim 1 wherein the reference mark comprises the first alignment mark.

6. The method of claim 1 wherein the step of detecting the first alignment mark further comprising illuminating the integrated circuit with a light source and magnifying light reflected from the integrated circuit.

7. An alignment detection apparatus comprising:

a stage having a surface for receiving thereon a semiconductor wafer;

a light source directed to illuminate a wafer when placed upon said stage with a light having a predetermined wavelength;

a beam splitter located to intercept light from said light source reflected off a wafer placed upon said stage and to split said reflected light into a first light path and a second light path;

an optical tool in the first light path;

a wavefront sensing tool in the second light path; and

a computer coupled to the optical tool and the wavefront sensing tool and receiving there from alignment detection data and outputting an alignment image.

8. The alignment detection apparatus of claim 7 further comprising a device for moving a semiconductor wafer placed on the stage in relation to the optical tool and wavefront sensing tool.

9. The alignment detection apparatus of claim 7 wherein the optical tool is a microscope.

10. The alignment detection apparatus of claim 7 wherein the wavefront sensing tool is a Shack-Hartmann detector.

11. The alignment detection apparatus of claim 7 wherein the computer is integrated within either the optical tool or the wavefront sensing tool.

12. The alignment detection apparatus of claim 7 wherein the alignment image is an image of alignment features, at least one of which is on the surface of a wafer placed on the stage.

13. The alignment detection apparatus of claim 12 in which the alignment features comprises a feature formed of photoresist on the surface of the wafer.

14. The alignment detection apparatus of claim 13 wherein the alignment features have a height of less than one fourth the wavelength of the light source.

15. The alignment detection apparatus of claim 12 in which the alignment features comprise a feature formed on a layer beneath the surface of the wafer.

16. A method for measuring the overlay alignment of at least two layers of a semiconductor device using a wavefront sensing tool comprising:

generating a reference signal by observing a flat reference surface with the wavefront sensing tool and storing the resulting signal;

aligning at least a portion of the semiconductor wafer containing a first and second alignment mark with the wavefront sensing tool;

illuminating the portion of the wafer and detecting a wavefront of light reflected from the portion of the wafer and from the first and second alignment marks;

magnifying the reflected wavefront of light;

generating a wavefront slope signal by observing the magnified reflected wavefront of light with the wavefront sensing tool;

determining the location of the first and second alignment marks be comparing the wavefront slope signal with the reference signal; and

calculating a distance between the first and second alignment marks based upon the results of the step of determining the location of the first and second alignment marks.

17. The method of claim 16 further comprising generating an image of the first and second alignment marks.

18. The method of claim 16 further comprising observing the reflected wavelength of light with an optical tool and determining the location of a third alignment and creating an image of the third alignment mark.

19. The method of claim 18 further comprising creating a composite image of the image of the first and second alignment marks and the image of the third alignment mark.

20. The method of claim 19 wherein the composite image is created by aligning a common feature detected by both the wavefront sensing tool and the optical tool.

21. The method of claim 18 wherein the third alignment mark is in a layer underlying the first and second alignment marks.

22. The method of claim 18 wherein the wavefront of light has a wavelength and the first and second alignment marks have a height that is less than one fourth of said wavelength.